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ARCTIC SLOPE TELEPHONE ASSOCIATION COOPERATIVE, INC.
COPPER VALLEY TELEPHONE COOPERATIVE

Dated: June 17, 2013

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I. INTRODUCTION AND BACKGROUND

On May 9, 2013, Matanuska Telephone Association (MTA) filed a Petition for Clarification for the purpose of requesting the Commission direct the Wireline Competition Bureau (WCB) to either correct the negative Alaskan CapEx coefficient¹ included in the Bureau's Quantile Regression Model, or have the Bureau rerun the Model to remove the erroneous factor in order to not penalize carriers operating in the state of Alaska. Alaska is the largest state in terms of square miles in the country, and presents a population-sparse, geographically challenging and harsh climate environment in which to provide communications. MTA correctly states at page 1 of its filing that "*there is unanimity among FCC Commissioners that the Alaska coefficient used in the Model was supposed to, or should, account for the high costs of deploying broadband in Alaska.*" The purpose of these comments is to offer arguments in support of the MTA Petition.

II. A VARIETY OF FACTORS ACCOUNT FOR THE HIGH COSTS FACED BY ALASKA COMMUNICATIONS PROVIDERS

In its Petition, MTA identified several factors that contribute significantly to the high costs faced by Alaska carriers including, but not limited to: unique geography and topography, low population density, and harsh climate. Both ASTAC and CVTC demonstrate each of these characteristics as noted below.

At footnote 10 of its Petition, MTA offers a list of arctic conditions that impact Alaskan provider costs: the duration of winter, which limits construction time; snow

¹ At this juncture, the Bureau QRA Model uses a -0.6223 Alaskan coefficient in its CapEx regression. By using this negative coefficient, the result is both unsupportable and illogical CapEx benchmarks that punish Alaskan carriers that provide service in some of the harshest climates and most challenging environments in the country. This result is contrary to the assertions offered by former FCC Chair Genachowski to Senator Mark Begich of Alaska at the recent Senate Oversight Hearing. The current Commission should work diligently to correct this error in an expedited manner.

effects; wind load; absolute temperatures; chill temperature that impacts field work; freeze thaw cycles in the presence of moisture; permafrost; and storm frequency. We have also included in a separate attachment pictorial evidence of these conditions faced by ASTAC and will do so in reply comments for CVTC in their deployment of capital infrastructure.

Unique geography and topography

Copper Valley Telephone Cooperative, Inc. (CVTC) is a rural Alaska cooperative serving six exchanges and is headquartered in Valdez, Alaska. CVTC serves some of the most remote and challenging areas in Alaska.

CVTC operates in two districts, with the district offices located 100 miles apart. It is a two hour drive over Thompson Pass that traverses the Chugach Mountain range. The Glennallen District serves four exchanges covering approximately 8,800 square miles. It is a two hour drive from the Glennallen office to the Mentasta exchange. It is a four hour plus drive to the McCarthy exchange that is located within the country's largest national park. Four of the six exchanges served by CVTC are on the road system (Valdez, Glennallen, Chitina, and Mentasta). The two exchanges CVTC serves that are not on the road system provide logistical challenges.

Tatitlek is a native village in Prince William Sound. To get to Tatitlek, it is a 20 minute small plane ride or a 2 hour boat ride. In order to provide broadband service to this Alaska native village, CVTC and its affiliates constructed a microwave system that required four hops. The longest hop is approximately 40 miles over water. To access three of the four remote microwave hop sites requires the use of a helicopter for transportation.

The McCarthy exchange is located 90 miles off the Richardson Highway. Approximately two thirds of this distance is on an old railroad bed. During the summer season, it requires about a four hour drive from the nearest CVTC office. During the winter, access is limited as the one hour flight required may be grounded due to the extremely cold temperatures (minus 50 degrees Fahrenheit) often experienced in that region.

Construction in the CVTC service areas can prove to be quite expensive. One piece of the CVTC fiber network passes through the Keystone Canyon. This is a 3 mile canyon that required boring under the canyon to bring fiber to Valdez. The price for this project included costs of \$132 per foot just for the boring work, or nearly \$700,000 per mile. This fiber also traverses Thompson Pass, which is the same region that the Trans Alaska Pipeline (TAPS) traverses carrying crude oil from Alaska's North Slope to the tide water in Valdez. It is worth noting that this section of the TAPS was one of the most expensive sections of pipeline of the entire 800 mile TAPS route.

For the ASTAC territory, as explained in detail in the attachment, Arctic Construction and Maintenance Challenges on the North Slope 2q2013, Alaska is different and the North Slope is extreme. For ASTAC, the geography of serving on the tundra creates unique challenges. As a point on interest, the tundra can barely support the weight of a human being in the summertime; vehicles would quickly become high centered and the driver subject to a healthy fine for going off road and scarring the tundra². As noted in the September 4, 2012 newsletter of Alaska's United States Senator

² The only equipment that can traverse the tundra in the wintertime is known as a rolligon. It is the only vehicle allowed off the gravel that won't damage the fragile tundra and is used to resupply remote sites for winter exploration. ASTAC does not presently have a rolligon in its rate base.

Lisa Murkowski: *“Flying over the North Slope in a helicopter, a land that is more water than terrain, walking on the tundra that is like a magnificent sponge filled with color and water and delicate flowers.”*

This type of terrain has resulted in a paucity of road miles for ASTAC and this creates problems for ASTAC in a QRA system that is driven by road miles and road crossings³.

Low population density

The service territory for CVTC is approximately 9,600 square miles. This equates to a service territory that is approximately the size of the State of New Hampshire, but with a much smaller population of approximately 7,000. This equates to a population density of less than one person per square mile.

The ASTAC territory is much larger than any of the New England states. In fact, the ASTAC service territory is larger than the state of Minnesota.

Harsh climate

Simple observation indicates that climate in the state of Alaska is harsher than the vast majority of the lower 48, and the current result of the Bureau’s QRA model has produced an inequitable result.

For example, here is some 2012-2013 climate data for Valdez, the corporate headquarters for Copper Valley, from the Avalanche Forecast site, as of May 1, 2013:

Total snowfall since July 1, 2012 379.8 inches (31.65 feet)

³ The problem with using data based on road miles for ASTAC was previously established in the discussions embedded in the proceeding that granted ASTAC an expedited data waiver request related to the road miles and road crossings variables on November 28, 2012. For a study area such as ASTAC that is larger than the state of Minnesota with only 637 road miles, it is apparent that other data sets based on road mile relationships will be problematic.

Snowfall since March 1, 2013	127.3 inches
Snowfall in April, 2013	48.6 inches

In the ASTAC study area, we provide climate data for a representative exchange:⁴

Average annual temperature 10.4 degrees Fahrenheit
Average annual rainfall 4.16 inches
Average annual snowfall 29.1 inches

From the same data source, we provide data for Valdez and Glennallen in the Copper Valley study area:

VALDEZ

Average annual temperature 38.3 degrees Fahrenheit
Average annual rainfall 67.41 inches (5.62 feet)
Average annual snowfall 327.3 inches (27.275 feet)

GLENNALLEN

Average annual temperature 26.1 degrees Fahrenheit
Average annual rainfall 11.17 inches
Average annual snowfall 55.2 inches

III. THE COMMISSION SHOULD REFLECT AN ADJUSTMENT FOR THE ALASKA CAPEX COEFFICIENT IN 2013

At footnote 2 of its filing, MTA suggests that the Bureau could make appropriate corrections as a part of its effort to develop a methodology that will generate a single total loop cost for each study area beginning in 2014.

While we understand that the WCB staff is working to produce a new result for 2014, it is not acceptable to penalize Alaska carriers during the entirety of 2013 while these data errors are being corrected. Thus, an interim solution is required that would

⁴ Alaska Climate Research Center: climate.gi.alaska.edu. The Barrow exchange is used as there is a climate research station located there.

apply to the 2013 calendar year, by removing the negative CapEx Alaskan coefficient while leaving the Alaskan OpEx coefficient in place pending further review.

IV. OTHER FEDERAL AGENCIES RECOGNIZE CONSTRUCTION COSTS ARE HIGHER IN ALASKA

In its Petition at page 8, MTA offers data from the Army Corps of Engineers Construction Cost Manual that concludes that Alaska has the highest costs in the nation. We concur.

In addition, there are other sources that corroborate the known fact that construction costs in Alaska are unique and extraordinary. Some portions of the QRA development process appear to have been done in a vacuum, as there are multiple sources that corroborate that construction costs are higher in Alaska⁵ due in large part to climactic conditions.

According to a Department of Defense (DOD) study released January 16, 2004⁶, there are a multitude of factors that must be considered when constructing in the Arctic. Among these factors, supply of labor, transportation, maintenance and scheduling all contribute to higher costs. In the arctic there is a short supply of skilled labor. When a project must be constructed, skilled labor is brought in from other regions, requiring additional expenses for housing and feeding workers. The labor must be paid at a premium due to the long hours that must be worked during the short construction season. Materials must also be transported long distances to Alaska, as many of the materials required for construction are not available locally. Considerations must be made for pre-fabricated parts, as fabrication in the arctic can be an expensive and time-consuming

⁵ The Bureau's attempt to create a variable to recognize the unique circumstances of operating in Alaska worked against Alaska carriers by assigning a negative coefficient to Capex.

⁶ DOD UFC 3-130-07 www.wbdg.org/ccb/DOD/UFC/ufc_3_130_07.pdf

endeavor. The “construction window” is dictated by season when the sun is in the sky for the majority of the 24-hour cycle, and when the ground temperature is raised enough to begin digging. Shipments of materials by barge cannot be made until the sea ice breaks apart which occurs simultaneous with the onset of the construction season. Delays during this time shorten the construction season and cause the remaining work to be more expensive. In order to mitigate delays, more expensive forms of shipping are used to guarantee timely arrival of materials. Projects are often scheduled over multiple years as the construction season is not long enough to complete a full project. Bringing labor in year-by-year adds additional costs to the construction project.

V. THE CHANGES FOR THE ALASKA CAPEX COEFFICIENT SHOULD BE REFLECTED AS PART OF THE 2014 ADJUSTMENTS

It is crucial that the Bureau remedy the situation with respect to the Alaska CapEx variable as a part of its work for 2014 revisions. When a variable behaves opposite to the hypothesized effect, it should be reexamined in an effort to explain the deviation from expected behavior⁷. Our research on this matter indicates that: *“If some standard variable does generate unusual estimates, the anomaly is worth reporting. Even better, it should alert the author before publication that something may be severely wrong with the underlying data or specification (Hammermesh, pg. 376).”*⁸

⁷ Kennedy, P. E. (2002) Sinning In The Basement: What Are The Rules? The Ten Commandments Of Applied Econometrics. *Journal of Economic Surveys*, Vol. 16 No. 4, 569-89.

⁸ Hamermesh, D. S. (2000) The Craft of Labormetrics. *Industrial and Labor Relations Review* Vol. 53 No. 3, 363-80.

VI. THE GRANT OF RELIEF REQUESTED BY MATANUSKA COMPORTS WITH STATUTORY PROVISIONS APPLICABLE TO THE COMMISSION AND WITH PREVAILING JUDICIAL PRECEDENT

In its Petition, MTA offers relevant citations and legal precedent. We add that if the Commission does not act swiftly to correct the Bureau's error on the Alaska CapEx coefficient, the situation will resemble an unconstitutional Bill of Attainder⁹ which the United States Supreme Court applied against Congressional or legislative acts. We are concerned that Alaskan carriers have been targeted for differential punitive treatment, as we are outside of the parameters of the "market-based" economic model favored by the Bureau. With delegated authority¹⁰ from the Commission comes a responsibility to act prudently and equitably with respect to the laws in effect with respect to confiscation¹¹.

VII. CONCLUSION

Nobel Laureate economist Milton Friedman offers a view relevant to this instant proceeding with the following statement:

I have long had relatively little faith in judging statistical results by formal tests of significance. I believe that it is much more important to base conclusions on a wide range of evidence coming from different sources over a long period of time.

Alaska has been in the union for over 50 years, and the evidence is overwhelming.

In the previously cited Hammermesh article from footnote 8, Hammermesh builds off of Friedman's quote by imploring the statistician to "*search for additional evidence, both corroborating evidence, and, especially, discomforting evidence. If your theory is*

⁹ *United States v Lovett*, 328 U.S. 303, 315 (1946).

¹⁰ The "power to regulate is not a power to destroy. . ." *R. R. Comm'n Cases*, 116 U.S. 307,331 (1886).

¹¹ *Bluefield Waterworks & Improvement Co. v Public Service Comm'n of West Virginia*, 262 U.S. 679, 692-693; 42 S. Ct. 675 (1923)

correct, are there testable implications? Can you explain a range of interconnected findings? Can your theory encompass its rivals in the sense that it can explain other models' results?"

The data found throughout this set of comments that support the MTA Petition for Clarification provides a strong dose of discomfoting evidence. We respectfully request the Commissioners interject a dose of common sense and logic into the debate on the Alaska CapEx coefficient and grant the interim relief which ASTAC and CVTC request in these comments for 2013 and direct the Bureau to make similar adjustments in any 2014 data as requested by MTA.

Respectfully submitted,

Via ECFS at 6/17/13

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